**Detailed Meeting Notes**
**Hamilton Army Airfield Restoration Advisory Board**
**Hamilton School, Multi-Purpose Room,**
**Novato, California**
**October 16, 2002**

## Attendance

### RAB Members Present:

Ed Keller; Thomas Macchiarella; Naomi Feger; Ray Zimny; Jim McAlister; Jim Ponton; Preston Cook; Tunstall Lang; Matthew McCarron; Patricia Eklund; Theresa McGarry.

### RAB Members Absent:

Richard A. Draeger; Sabrina Molinari; Karol Raymer; Jack Walton; Lance McMahan; Marucia Britto; Thomas Hinman; Manuel Meir; Joan Dekelboum;

### Others Present:

Joy Lanzaro; Hugh Ashley; Sigalle Rosner; Travis Williamson; Tom Pinard; Jim Davies; Debbie Butler; Tom Roth; Dave Ruiz; Inge Martin

## Welcoming Remarks

Tunstall Lang welcomed the community to the October 16, 2002 meeting of the Hamilton Army Airfield Restoration Advisory Board (RAB). The meeting began at 7:10 p.m.

## Navy BRAC Update — Thomas Macchiarella, DODHF Novato BEC

*Project Update:*
Mr. Macchiarella reported that the last quarterly Groundwater/Surface Water Sampling was performed in August but the report and figures have not been prepared. In addition to quarterly groundwater monitoring program, a new monthly program has been initiated for certain wells associated with biosparging system to track the system's effectives. Figures and data from the monthly and quarterly events will be available at the next RAB meeting.

The Navy is working on the draft remedial design and work plan. Once finalized, a more detailed operations and maintenance plan that is specific to operating the biosparging system for the long term (approximately 1.5 years) will be created. The regulatory agencies have approved parts of the plans that lead to the installation of the system.

*Remediation System:*
The objective of the remediation system is to stabilize and contain the MTBE plume on Navy property and to reduce the time required to achieve the maximum contaminant levels (MCL) for all gasoline constituents in the groundwater. Biosparging means injecting air into the groundwater to increase the rate of biodegradation. Biodegradation refers to the "bugs" (microbes) that eat the contaminants (hydrocarbons) and convert them into carbon dioxide ($CO_2$) and water. After the biosparging system has reached its potential —anticipated to be approximately 1.5 years of operation—then the site will

enter a monitored natural attenuation which is planned to reduce the contaminants to MCLs.

Mr. Macchiarella showed a map of the plume's "hot-spots" and biosparging injection points. He also showed some photos of the main equipment shed with compressors that pump air into manifolds, distribution lines, and biosparging injection wells.

The Navy officially started running the system on September 6, 2002. Rigorous monitoring of the system and wells was conducted on a daily basis for first two weeks. Presently, the monitoring is occurring weekly for the next few months. Depending on the results, the monitoring will be conducted monthly after that. The measurements used to determine the effectiveness of the system are sparging flowrates, injection pressures, groundwater elevation, dissolved oxygen concentrations, and soil gas measurements (VOCs, $O_2$, and $CO_2$). The Navy also sends off canisters of shallow soil gas to the laboratory to get very specific and detailed measurements to ensure that the system is operating at an acceptable level.

Preston Cook: What kind of soil types do you have at these sites?
Mr. Macchiarella: It varies significantly around the site. Most of the injection points and monitoring wells were focused in what appears to be a former riverbed or channel which contains sandier soil and has a high conductivity (allows higher groundwater flow). The Navy found that most of the mass of the MTBE is in this area, which works out well because sandy soil is easier to remediate, especially with this type of system. On the edges of that sandy zone are more impervious or tighter soils, silty clays, etc.

Preston Cook: How much pressure is injected into wells? Is 15 psi fast or slow?
Mr. Macchiarella: 15 psi is not a very high pressure. The design air flow rate is 2-6 cubic feet per minute into each well. Currently, we are running four cubic feet per minute in each of the sparge wells.

Preston Cook: Where does the injected air go?
Mr. Macchiarella: The air is being injected below the groundwater surface, diffusing into the saturated zone (the water) and providing oxygen to the microbes to help them breakdown the contaminants. Our data also shows that we have a minimal amount of VOCs pushing up into the vadose zone. One of our goals was to minimize the amount of VOCs pushing upwards into that zone.

Preston Cook: So you don't want anything to escape from this process?
Mr. Macchiarella: Correct. The design is to enhance the biodegradation, to encourage the bugs to eat and convert the hydrocarbons into $CO_2$ and water. We don't want to encourage the stuff to get pushed out of the aquifer and away from the treatment zone. As a back-up measure, we do have a vapor extraction system installed and ready to go if needed. If we were to intiate the SVE system, the injection rates to the biosparing wells would likely be increased, and the system would essentially be converted to a typical IAS/SVE system (in-situ air-sparing/soil vapor extraction system). The chief difference between a biosparging system and an IAS/SVE system is injection flowrate.

Preston Cook: Do you have a goal for completion of this project?
Mr. Macchiarella: Yes, the Navy believes that the biosparging system will reach its returns in 1.5-2 years. This is based on operation of a similar system elsewhere on the site. We anticipate that the system will achieve more than 90 percent reduction in MTBE, from the current level of 10,000 ppb to a few hundred ppb, which is a big reduction.

Preston Cook: Is remediation being done at the gas station or further to the north?
Mr. Macchiarella: The remediation is being conducted further to the north. The gas station area was treated in 1998.

Preston Cook: What is the cost of doing this?
Mr. Macchiarella: I'll get a rough cost estimate for you at the next meeting.

Matthew McCarron: Are there any storm drain or sewer culverts running down C Street that may be affected by the air pressure?
Mr. Macchiarella: Yes there are storm drains, and we have a map of all the utilities. However, the air is being injected well below the depth of the utilities.

Matthew McCarron: Could the injection of air possibly push the VOCs into the culverts?
Mr. Macchiarella: The storm sewers would be at a shallower depth (typically about 4 feet below ground surface), while the air is being injected at 18-20 feet below ground surface. The Navy monitors soil gas probes at shallow depths to ensure that the level of VOCs does not increase significantly as a result of the system. The Navy also periodically uses field meters to provide quick answers.

*Future Activities*:
The Navy just began the first round of monthly monitoring on specific wells to track the effectiveness of groundwater treatment. Regular soil-gas sampling will continue on a monthly basis to ensure that the system is not increasing VOCs in the vadose zone. Quarterly ground water monitoring will continue over the entire groundwater well network. At the December RAB meeting, the October groundwater monitoring data will be available. The Navy expects to see drops in contamination related to the treatment system.

Pat Eklund: What is status of property transfer for the gas station proper?
Mr. Macchiarella: A negotiated sale between the developer and the City of Novato is currently underway. Escrow has been extended for one year, although that does not mean that it will take a full year to transfer.

## Landfill 26, GSA, and North Antenna Field - Jim McAlister, USACE

### Landfill 26

*Buffer Trench:*
The purpose of the buffer trench is to separate the landfill from Hamilton Meadows. The trench goes three feet into groundwater or to bedrock, which ever was encountered first. The trench is filled with gravel and has vent pipes that are connected to a collection tube in the trench to vent methane to the ambient air. The Army will also install an impermeable barrier to prevent the methane from traveling linearly down the length of the trench. The entire length of trench and collection tube has been installed between landfill and Hamilton meadow subdivision.

The impermeable barrier is still in the process of being installed. The delay is due to a significant increase in the contractor's price for installation. In order to cover the cost of installation, the Army has suspended all of the contractor's other activities around Hamilton (including the first annual monitoring event). Weather conditions are being considered as well, because the heavy cranes used for the installation are difficult to work in the rainy season. Construction should start in mid-November

Preston Cook: What is the installation process?
Mr. McAlister: First the contractor drives a couple piles into the ground and welds a jig to them. Once the jig is set, they can drive about six sheets or 30 linear feet worth of the barrier using a vibrating drill. A short movie illustrating the installation process will be shown at the next RAB meeting.

Preston Cook: Why wasn't the barrier installed with the construction of the trench?
Mr. McAlister: Particularly at the south end, the trench was collapsing as it was being dug. It would have been impossible to install the barrier at that time because it would have taken too long. In retrospect, it may have been possible in the southeast side where the trench held quite well. However, it is now too late for that.

Preston Cook: How deep and long will the barrier be?
Mr. McAlister: The barrier is approximately 1600 feet long, and extends to 2 feet below groundwater which, along the south end is approximately 13 feet deep. The trench was dug one or two feet deeper than that just to make sure a dam wouldn't be created, and to allow for a continued groundwater pathway.

Preston Cook: Can groundwater travel past the barrier?
Mr. McAlister: The groundwater will be able travel underneath the barrier. The barrier is for soil gas and not for the groundwater. The groundwater here, as evidenced by the Navy's MTBE plume, travels from south to north, and at the south end of the landfill it travels east to west. By installing the trench in this manner, we have gravel on both sides of the plastic layer. The groundwater hits the gravel on the downgradient side of the plastic and is able to move hydraulically underneath since there is no impediment on the bottom. If we had driven the barrier all the way down into the soil, then we would have

created a dam, but we left the 1 to 2 feet of gravel underneath, so it does have hydraulic connectivity.

Preston Cook: I thought the trench was constructed and filled with gravel to stop movement of soil gas. Now, it seems that there are two barriers.
Mr. McAlister: Yes, that is true. But the impermeable barrier is required by Title 27, the California Code of Regulations. We decided that trying to prove that the barrier is not needed would be more costly than the cost to build it.

Preston Cook: Has the contract been signed yet with contractor for the permanent barrier?
Mr. McAlister: That will occur this week.

*Risk assessment:*
The risk assessment concluded that it is safe to live in Hamilton Meadows. Excess lifetime cancer risks range from 5 in a billion to 4 in one million, and exposure to the measured VOCs do not pose a current health risk. The document is in draft final form and the Corps has addressed the comments of stakeholders and agencies. The document was sent out to them again and they are currently reviewing the Corps responses to comments. There are copies of the assessment at the Novato Public Library and the BRAC office.

*Continued monitoring*
The Corps fiscal year just began and the new contract money has not yet been received. As a consequence, the Corps staff will conduct field monitoring for methane rather than using the contractor. The Corps staff will also perform monitoring for VOCs on the south side of the landfill as part of the monitoring for the buffer trench and groundwater. No lab testing will occur until more funding is available.

Jim Davies: Will we miss groundwater analysis for this month?
Mr. McAlister: We will miss the soil gas analysis for this month. Groundwater monitoring is part of a semi-annual event. The Corps is delaying that analysis until the fiscal year 03 money is available. The VOC lab analysis is the only action that is not being done until contract dollars come in. Most likely the VOC monitoring will continue in December once funding is available.

***Timeframes***

Impermeable Barrier is to be installed in the buffer trench in November 2002.

The risk assessment will be finalized in October 2002.

Compliance with Board Order will be achieved in 2005-2008.

RWQCB permit compliance will begin in 2008.

Monitoring of the landfill will continue throughout this time period.

*North Antenna Field:*
Ten areas were identified as areas of concern: small arms ranges, pistol range, skeet range, three burn pits, an above ground storage pits, and septic systems. The primary

contaminants of concern are lead (approximately 90% of the contamination in the area), PNAs associated with incomplete burnings at the burn pits as well as the clay pigeons at the skeet range, petroleum, dioxin/furans, PCBs, and low levels of VOCs in the septic systems.

***Timeframes:***
Remedial investigation- The Corps is responding to comments on remedial investigation, and should have that completed by the end of October 2002. The Corps just received comments on the workplan.
Risk Assessment- completed by January 2003
Feasibility study- February 2003
OE clearance- October 2003
Decision document- November2003
Remedial action- October 2005

Question (Pat Eklund?): Do you have any money programmed for remedial actions?
Mr. McAlister: Yes. We currently have programmed between now and the end of 2005 about $25 million for remedial actions, primarily for the lead which will likely have to be hauled offsite which is very expensive. We are hoping to treat some in place, but that has yet to be determined.

Jim Davies: When will the revised monitoring plan be available?
Mr. McAlister: The plan is due to the Corps at the end of October 2002. The Corps will send it out shortly thereafter.

Jim Davies: You also talked about putting all the investigation data together and putting that out?
Mr. McAlister: Yes, ITSI is compiling this. The Corps is reviewing and providing comments to ITSI now. But until the Corps gets the new contract dollars, ITSI won't be able to continue working.

## Army BRAC Update: Ed Keller, BRAC Environmental Coordinator (BEC)

## Documentation and Field Work

### Documentation

*Main Airfield Parcel:*

- Record of Decisions/Remedial Action plan (ROD/RAP) – The document is currently under discussion with DTSC.
- Finding of Suitability for Early Transfer (FOSET) – Discussions are continuing with DTSC. The FOSET needs to be finalized before transfer of the property can go forward.
- Environmental Baseline Survey (EBS) – The survey was forwarded to the regulators for review on March 28, 2002. This document is contingent upon the other documents

that are currently being negotiated, so that is probably why we haven't heard back yet.

Once the Army's memorandum of Agreement has been finalized with the State of California, the ROD/RAP, FOSET, and ESB can move forward. The MOA, ROD/RAP and FOSET are currently under discussion at quite a high level within the Army, DTSC and CalEPA.

Matthew McCarron: Wasn't a baseline survey conducted 7-8 years ago?
Mr. Keller: Yes, this document is an update to that survey.

Matthew McCarron: Was there any additional monitoring or survey work completed?
Mr. Keller: No. We conducted a site inspection and updated the documentation of all of the other work that has happened on the site since the previous baseline survey was completed. There will need to be another similar update done soon since the survey was done a while ago. The survey was conducted to support in transferring the property.

*Hospital Hill:*
The Army has signed the FOST, and transfer to the City of Novato is expected soon. The City attorney is currently negotiating the deed language with the Army.

Pat Eklund: Are there issues we should be aware of pertaining to the deed?
Mr. Keller: The only issue I know of is that the lawyers are discussing the CERCLA language used in the deed. The City wanted to use some specific language that is different from the Army's standard language that we use on deeds. We are seeing if there is any leeway on that language, but I don't have anything to report for you.

*POL Hill:*
The third round of groundwater monitoring was completed in August and the data report was submitted to the Army. Once the Army finishes reviewing it, the report will be distributed to the regulators. Discussions will occur with the RWQCB to determine what the long-term monitoring plans will be for POL Hill. The question is which wells will be involved and how frequently monitoring will occur. The transfer process to the city will resume once these issues have been determined.

Coastal Salt Marsh:
- Feasibility Study – The study was forwarded for regulatory review on April 24, 2002. The Army continues to work with the regulators to resolve comments.
- Sampling Data Report – Currently in final review by the Army.
- Proposed Plan – The plan is currently on hold pending the resolution of comments on the Feasibility Study.

**Field Work**

*Building 82:*
The Army completed some excavations in 1998 and 1999 related to a transformer that was located adjacent to Building 82. There was some groundwater present that was

affected by petroleum associated with the transformer area, so the Army performed some additional sampling and the data was just received last week. The report should be prepared shortly for review by the Army and then sent to the regulators. There is a fairly small zone of groundwater around this area, and the Army did not find any corresponding impacts to soil. The Army believes that the source of the contamination was the transformer area that was already cleaned up, and the groundwater was just a lingering impact in a small area.

*Removal of Asbestos:*
The current scope has been completed, and all the material has been disposed of off site. The report is due shortly and will be available for review. During the time when the majority of work occurred, there was asbestos identified in the boiler in one of the rooms. A second field effort was conducted to deal with this and all the remaining items were cleaned up. The only items that remain on site are two pipes that are buried.

*Main Airfield Inboard Sites Remediation:*
The effort included the work in four areas identified in the Inboard Area Site Record of Decision/Remedial Action Plan (ROD/RAP): Building 41 area, Spoil Pile F and Revetments 6&7. All excavations are complete and confirmation samples were collected indicating that the actions were very successful. The Army review of the construction report is almost complete and Agency review should begin this Fall. Mr. Keller showed pictures of trucks hauling the soils offsite.

Pat Eklund: How much soil was removed and where was it taken?
Mr. Keller: All of the soils, Class 2 and 3, went to Altamont. There was an estimated 5,000 tons removed.

*POL Hill:*
The third round of monitoring samples have been collected, and the results will be forwarded and discussed with the regulators this Fall. The discussion will determine future monitoring requirements.

Monitoring wells – We had quite a few monitoring wells on site that had been installed over the years. We have now removed or "abandoned" those wells that are no longer needed. Only a handful of wells now remain to provide information for future monitoring events.

**Next Steps**
*Inboard property:*
- Complete the finding of Suitability for Early Transfer (FOSET) based on ongoing discussions between the Army and DTSC.
- Complete the EBS.
- Transfer the property.
- Determine investigation requirements for any new sites.

*Coastal salt marsh:*

- Complete sampling data report.
- Complete the Feasibility Study, which will present alternatives for remediation. This is one of the documents currently being discussed by the Army and DTSC, and it needs to weigh the destruction of sensitive habitat against clean-up of contaminants.
- Complete the proposed plan, which will present the recommended remedial alternatives.
- Prepare the decision document, which will document the selected remedy.
- Implement the remedial actions.

Pat Eklund: Can I receive a copy of the report of soil disposed and Class 2 soils versus Class 3?
Mr. Keller: This should not be a problem. I will provide that information to you.

Preston Cook: What is the schedule for the removal of some of the buildings that are still out on the airfield?
Mr. Keller: The San Francisco District of the Corps is responsible for this, I do not know the timeline for demolishing the buildings. The Army has given them the right to demo, but the Corps has not issued a right of entry to a contractor for the work to begin. They were hoping to have the work contracted before the end of fiscal year 02, which ended at the start of October.

Preston Cook: Can we get a report on that?
Mr. Keller: I will ask if there is more information available for the next RAB meeting
Naomi Feger: The San Francisco District Corps and the Coastal Conservancy have a schedule which is always being updated.

Preston Cook: When will the red tanker be removed?
Mr. Keller: The Coast Guard wants the tanker for training but it has not been transferred yet. This is still in the process of being coordinated.

Jim Davies: What is the status of the revetments?
Mr. Keller: Aerial photos were used to identify them and confirm that they were used for parking airplanes. The property lines are now being determined by the Army and Navy. In regard to location, the revetments have mostly been found along runways. Mr. Keller pointed out locations of sites on aerial photos.

Jim Davies: Are there plans to investigate the areas?
Mr. Keller: We need to determine what the investigation requirements will be

Jim Davies: What about the money that Rep. Woolsey secured for additional investigations?
Mr. Keller: That funding was only to be used on the FUDS (Formerly Used Defense Sites) project, related to Landfill 26. That had no impact on BRAC funding.

Jim McAlister: That money was used to install the impermeable barrier. We will use our Fiscal Year 03 money to continue the additional sampling. .

Tom Roth: What happened with “Foley Site”?
Mr. Keller: The Army put together a package of information for the "Foley Site", including sampling data, and historic information such as soil geology and channel information. The information was submitted to Mr. Foley and the regulatory agencies. The Army suggested a meeting at the end of October to discuss the matter further and to determine the sampling locations. The Army agreed with DTSC that we would take up to 12 samples to characterize the area and see if there is any evidence of disposal activity. Mr. Foley was invited out to survey the site and during that site visit he said he does not believe anything was buried at the site, just pouring of materials.

Preston Cook: Will the miscellaneous pier structures in the wetlands be removed?
Mr. Keller: There is no plan to remove any structures unless they are required to be removed for environmental remediation. I am not sure from the wetlands restoration side of things whether there are any plans to remove them. I’ll ask that question and report back.

## Regulatory agencies comments

There were no updates from regulatory agencies.

## Administrative Issues - Tunstall Lang

*Membership Assessment*

Every two years, beginning in September 1996, a selection panel will review the RAB to ensure that it reflects the diverse interests of the community. A committee needs to be formed to do this.

Pat Eklund and Preston Cook volunteered to be the committee to review the RAB membership. They will review the past attendance of members and develop a reconfirmation of interest. At the next meeting in December, the committee will present their recommendations.

Mr. Keller: The BRAC office has resources to assist you. You can review sign-in sheets to determine who has been attending and who has not. You should review the current membership and determine whether there is a need for advertising for new members and positions.

Preston Cook: How much longer will the RAB exist?
Mr. Keller: The RAB could exist for at least two years, at least through 2005.

Tunstall Lung announced that the next meeting will be held on December, 18 2002 at which time the Chair will be re-elected. The meeting will be held at the Hamilton School.